51.2.2

portions of RCRA part B application Eli Lilly

51.01.03.03 updated 4/8/51

SECTION: B
DATE: 3-15-87
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SECTION B

FACILITY DESCRIPTION

This section provides a general description of the Eli Lilly Industries, Inc., Mayaguez Plant as required by 40 CFR 122.25(a)(1). This description is intended to acquaint the permit application reviewer with facility operations. Complete details can be found in other parts of this application.

B-1: General Description (122.25(a) (1))

Eli Lilly Industries, Inc., Mayaguez Plant manufactures pharmaceutical compounds. Five (5) final products are manufactured in bulk which are packaged at Carolina's plant. Darvon (Propoxyphene Hidrochloride) and Propoxyphene Napsylate are two analgesic products that are produced since the beginning of the synthesis. Its intermediates are Isobutiro Phenone (IBP), Dextro Carbinol Camphor Sulfonate (DCCS), Dextro Carbinol Base (DCB) and the final products propoxyphene napsylate and hydrochloride. Also, the last step in the manufacture of two antibiotics, Keflex (Cephalexin Monohydrate) and Ilosone (Erytromycin Estolate Blended) are produced at Mayaguez. Other product manufactured in the plant is Dimelor (Acetohexamide) an

solvents are in the same family of solvents as those stored and treated at Mayaguez.

C-1(a) Containers

Small volumes of hazardous wastes are stored at Mayaguez in containers prior to onsite treatment or offsite disposal. These types of wastes can be categorized into groups consisting of: solvent laden solids for off-site disposal, waste solvents for on-site treatment or off-spec 40 CFR 261.33 (e) or (f) wastes.

Solvent laden solid wastes or solid wastes containing EP toxic heavy metals are destined for disposal off-site at approved secure chemical management facilities. These wastes are collected in containers and identified with the EPA hazardous waste numbers D001,D004,D005,D006,D007,D008,D009,D010,D011,F001,F002,F003 and F005. Table C-1 includes the actual or potential hazardous constituents in containerized solid wastes stored at Mayaguez. The relative concentrations are similar to those for the liquid hazardous waste shown in Table C-3. The constituents and relative concentrations are known from the manufacturing process tickets (protocols).

Liquid waste solvents from Eli Lilly Industries, Inc. at Carolina, manufacturing processes are destined for incineration on-site on tank farm at Mayaguez. These wastes are stored in drums or palletainers (portable tanks 250 gals.) in stainless steel until

the contents can be transferred to waste solvent storage tanks. The containers are identified with the EPA hazardous waste numbers D001, D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003 and F005. Table C-1 includes the actual or potential hazardous constituents in containerized liquid solvent wastes stored at Mayaguez.

The remaining materials stored in containers at the hazardous waste container storage area are off-specification commercial chemicals. These materials have been analyzed by the manufacturing departments, who have determined that the material is not satisfactory for production use. The material is stored in the DOT approved container in which it was received and properly labeled with the appropriate EPA numbers. Unknown or non-labelled drums are not accepted for storage until they have been properly characterized. We could expect to receive occasionally 55 gallons drums of off-specification corrosive hazardous material. Once received, this containers will be inmediately transferred to the facilities elementary neutralization system. This waste is solely hazardous waste because they exhibit the characteristic of corrosivity.

Written information on labels should be written in permanent ink & the labels should be positioned so that it is visible for inspection.

C-1(b): Tanks

Liquid hazardous wastes (solvents) are stored in tanks prior to treatment by incineration. Two types of liquid hazardous wastes are stored and incinerated at Mayaguez: primary waste and

secondary waste. Primary waste is spent solvents and is capable of supporting autonomous combustion in the incinerator's primary combustion chamber. Secondary waste is predominately water with small amounts of solvent which is injected into the incinerator's main oxidation chamber for thermal destruction adjacent from the primary wastes. These two types of wastes are treated in the incinerator. Table C-2 includes the actual or potential hazardous constituents in the liquid waste in tanks stored at Mayaguez.

The specific gravities of the primary and secondary wastes are important parameters for tank storage. The specific gravity of primary waste does not exceed 1.20 and the specific gravity of the secondary waste does not exceed 1.10. These values are within the design tolerances of the storage tanks. Additional waste characterization information is presented in Sec. C-1(e).

C-1(c): Waste Piles

Eli Lilly Industries, Inc., Mayaguez does not have hazardous waste piles.

C-1(d): Surface Impoundments

Eli Lilly Industries, Inc., Mayaguez does not have hazardous waste surface impoundments.

C-1(e): Incinerators

As noted in Section C-1(b), Mayaguez incinerates two types of liquid wastes: primary waste and secondary waste. Primary and secondary wastes are classified as hazardous because they contain constituents listed in 40 CFR 261 Subpart D and/or they exhibit the characterisitics defined in 40 CFR 261 Subpart C. Table C-3 is a general listing of the constituents in liquid wastes incinerated at Mayaguez. Liquid wastes may also contain compounds listed in Appendix VIII of 40 CFR Section 261. In order to determine the chemical composition and physical characteristics of the liquid wastes, primary and secondary wastes have been sampled and analyzed. The results of these analyses are presented in Table C-3.

As can be seen in Table C-3, primary and secondary wastes contain both hazardous and nonhazardous constituents. The concentration range of the waste compositions is due to the scheduling or campaigning of the batch operations which generate these wastes. Table C-3 lists the constituents in the wastes which are normally present in concentrations greater than 0.01% (100 ppm). Appendix VIII constituents are underlined.

Organic constituents which are listed in 40 CFR Part 261, Appendix VIII, and which may be present in primary or secondary wastes during the permit period are listed below:

for the treatment of the waste of this specific tank, besides to the weekly analysis already established for the rest of the wastes

C-2(a)(1): Feed Tank Analysis

Primary waste and secondary waste are collected and stored in separate tank systems. The primary waste system consists of two receiving/feed tanks from which waste is pumped to the incinerator for high temperature thermal oxidation. The secondary waste system is made up of three holding/feed tanks. The secondary waste will be either pumped from a full feed tank to the incinerator for treatment, or to holding tanks which collect and hold the secondary waste while the feed tank is on line pumping waste to the incinerator for treatment. For both primary and secondary waste systems, the tanks can be alternated between holding tanks and feed tanks.

The U. S. Environmental Protection Agency Region II requested in a letter dated April 28,1986 a revised waste analysis program for the incinerator waste feed. Eli Lilly Industries, Inc. has modified the analysis in accordance with EPA's request. The revised analysis program involves the following:

1. Once every two weeks primary and secondary wastes samples will be mixed from individual tank samples that have been collected using the procedures described in Section C-2(cc).

SECTION D

PROCESS EQUIPMENT

D-1: Containers

D-1a: Containers with Free Liquid

D-1a(1): Description of Containers (122.18(b)(a); 264.172)

The only containers that are used in our plant are 55 gallon steel drums, 57 gallons plastic drums and 250 gallons stainless steel palletainers to be treated in the thermal oxidizer. Upon the arrival of these containers to the Mayaguez Plant, the containers are transported to the storage hazardous waste area. Containers containing liquid hazardous waste are later emptied into waste storage tanks to be incinerated. The only containers which are normally stored for a period of over ninety (90) days are those containers that store sludge or solid hazardous wastes, prior to shipment off site to an approved facility.

Containers that store both liquid wastes or sludge waste are constructed of metal and are inspected weekly and maintained in good working condition.

Most of the containers used to store hazardous waste do not have liners. The containers have a coating that protects the drum against corrosion. The coating is fully compatible with the waste stored. Palletainers are specially designed containers to facilitate the handling during shipping. They are designed to withstand up to 9 psig and are fully compatible with the waste stored. All containers meet the standards of the Department of Transportation (DOT).

What kind of special coating is used to protect the cement base from corrosive waste? How is the coating maintained?

A detailed diagram of the containment system for the Hazardous Waste storage area is shown in Figure B-7. This storage area is capable of holding a spill of 100% of the material stored, since the retention volume is ten times greater than the required. The floor is reinforced concrete 6 inches minimum thickness to prevent percolation. This containment has 1/8 inch grade to a grill for draining purposes. The concrete used at the floor has a compression specification of 3000 psig and the concrete used at the walls has a compression specification of 2500 psig. For the ignitable materiales a roof is provided to protect them against sunlight exposure.

The waste stored in the Hazardous Waste storage area is compatible with the construction material. For protection against corrosive wastes a special coating covers the concrete, that can stand very low pH values.

D-1a(2): Container Management Practices (264.173)

Drum containers used for hazardous wastes are washed and stored in the empty drum area for final disposal. These drums could either be reused to store hazardous waste or crushed and disposed in a municipal landfill as non-hazardous waste. The criteria to determine when the drums will be reused or destroyed will depend on the physical condition of the drums. Decontamination procedures to render the drum not contaminated are explained in Section D-1(b)(4). The palletainers are reusable containers and are shipped back and forth from Carolina's plants to the Mayaguez plant.

The drums which store hazardous waste are handled by qualified operators. In the event that drums are received from other Lilly plants, all containers will be received at the PM-7 (hazardous materials building) unloading area, identified, verified and then routed by forklift trucks to the hazardous waste storage area. All drums in the hazardous container storage area are stored on pallets and are routinely checked to assure that they are properly closed during the storage period. An aisle space of 30 inches is provided between rows of pallets for better access during inspection.

All containers are kept closed except during the addition or removal of the waste on site. During the period of time drums are in the storage area, the drums are carefully closed, and each drum is inspected and checked every week.

D-1a(3): Containment System Operation (122.25(b)(1); 264.175(b))

Drum containers at the Mayaguez facility store hazardous liquid wastes usually for not more than thirty (30) days. The hazardous waste liquid is managed according with Section D-1(a).

All containers are stored in a container storage area constructed of concrete which has the capability to hold any spill, leak or precipitation that might occur in the area.

If any crack or gap is observed during the inspection, the following criteria is followed for repairing:

1. If the crack is not greater than 1/16 inch, sealant coating will be used to cover the crack or gap.
2. If the crack is greater than 1/16 inch a "V" shaped groove will be made 2 inches deep along the crack. Then cement bonding will be placed and the crack covered with cement. The following day the sealant coating will be applied on top of that.

D-1a(3)(a): Requirement for the base or liner to contain liquids (264.175(a)(1))

The base of the container storage area has been constructed of solid concrete which has a minimum thickness of 6" at any point. Inspection of the containment area is made on a weekly basis to assure that the storage area is free of cracks and gaps.

D-1a(3)(b): Containment System Capacity (270.15(a)(2); 264.175(a)(2)

This containment area has the capacity to hold up to 58,000 gallons which would allow the equivalent liquid volume storage of 580,000 gallons. However the site will store a maximum of 900 drums of 55 gallon each, or not more than 50,000 gallons of drum storage capacity in this area.

In the event of a leak or spill the 1/8" slope of the pit will induce the material to move to the southern east corner. At this corner there is a grill and a small pit of dimensions 12" x 12". The spilled liquid is collected in this small pit and transferred to new drums with a pneumatic pump. The residues of the material are then cleaned using an adsorbent material. All containers are stored on wood pallets, which provide an elevation of 4" from the ground level. The drums are usually stored in one pallet level, only under the unusual circumstances of space limitation two level pallets will be used. refer to diagram?

D-1a(3)(c): Containment System Drainage

The containment area is sloped in a southerly direction to a drain system with valves that route any spills or leaks to the same sewer system as the tank farm. Before any noncontaminated stormwater is drained through this valve an operator will determine that the liquid is free of any contaminant by chemical or physical analysis.

Figure D-1 shows the dimension of the containment system. The enclosed volume of the containment is 7288 cubic feet equivalent to 54,587 gallons. Since we contemplate to store a maximum of 900 drums equivalent to 49,500 gallons, the containment system provides enough room to hold all the waste stored in drums.

D-1a(3)(d): Control of Run-off (270.15(a)(4); 264.178(b)(4))

The containment area has enough space or volume to prevent any run-on that could occur in the area. Run-on water is prevented by the 2 feet concrete wall that surrounds the containment system's. As was stated in Section D-1a(3)(c) the containment has sufficient space to contain any run-on that could occur.

Curbs and dikes are provided in the tank storage area, the container storage area and truck unloading station. These containment systems are made with concrete cement and are designed to hold the total volume stored within its enclosure. The run-on water never passes through these areas. A storm sewer system is designed (Figure B-3) to collect and handle the run-on water. All containment systems have valves for drainage which are conducted to the storm sewer system. A grading of 1/8 inch per lineal feet is provided in the containment system to the drain valve which ensures a complete removal of the water from the contaminant system once it is drained.

D-1(b)(2): Description of Containers(40 CFR 264.171 and 264.172)

The hazardous waste storage area has a capacity to store 900 of the 55-gallon metal drums or 900 of the 57-gallon polyethylene drums or an equivalent volume. The containerized waste can be either liquid or solid. The solid hazardous wastes without free liquids stored in the hazardous waste storage area are destined for off-site disposal either at an approved hazardous waste landfill in Puerto Rico or in the United States. Liquid hazardous wastes are stored until the contents can be transfered to one of the hazardous waste storage tanks. All these wastes are stored in carbon steel drums which meet DOT Specifications 17C, E, or H; or they are stored in 57 gallon polyethylene drums made with a high density polyethylene material.

Compatibility of wastes with the steel drums or polyethylene drums is determined by Technical Services on a case-by-case basis. Technical Services will use waste analyses, information from literature, and experience with similar wastes to select the approved drum which is compatible with the waste materials.

All hazardous waste drums are labeled by the generating department with a hazardous waste sticker as required by Regulation 40 CFR 262. The labels remain on the drums through final disposition. These labels are the official identification of waste materials contained in the drums.

D-1(b)(3): Container Management Practices (40 CFR 264.173)

The container management practices for hazardous wastes without free liquids are similar to those practices for wastes with free liquids described in Section D-1a(2).

D-1(b)(4): Container Storage Area Drainage (40 CFR 122.25(b)(1)(ii)(B) and 264.175(c))

The hazardous waste storage area is open and subject to precipitation. All precipitation that falls within the boundaries of the hazardous waste storage area is contained and collected. In addition, any leaks or spills are collected in the same containment system. The procedure to drain the containment system is the following:

1. A visual inspection of the area is done. If everything looks normal, that is, no leaks, no odors, no color is present, the inspector will check the pH value of the liquid. If the pH is between 6 and 9, the liquid is drained to the storm sewer system.
2. If some abnormal condition is observed, such as a leak, odor in the water or some color or if the pH does not fall within the specified limits, the following procedure is used:
    a. A sample is taken to assay Chemical Oxygen Demand (COD). If the value is above 100 ppm the water is contaminated.

b. We try to identify the source of contamination.

c. If solvent concentration is below 20,000 ppm of COD and the material does not appear in Appendix VIII of Part 261, the water will be routed to the Waste Treatment Plant.

d. If the condition of (c) above is not met, then, the water is collected in drums or tanks depending on the volume of water contaminated.

e. If the contaminated water does not contain heavy metals or contains them in concentrations below 30 ppm, the contaminated water is treated in our liquid incinerator.

f. If the concentration of heavy metals in the liquid is above 30 ppm, the waste is collected in containers and is treated and disposed in an approved off site facility.

As an additional control, all containers are stored on pallets to minimize contact with any liquids that might be on the floor of the storage area due to precipation, leaks, or spills.

All waste is stored in the same containment system, but is segregated according with its chemical and physical characteristics. Ignitable waste is stored under a roof area, corrosive waste is stored close to the drainage valve to prevent excesive contact between acid waste and the base of the containment system. Waste without free liquid is stored at the north side of

the containment system.

D-2: Tanks (40 CFR 122.25(b)(2))

D-2a: Description of Tanks (270.16(b); 264.19)

Eli Lilly Industries Mayaguez Plant stores hazardous liquid wastes for incineration in two separate tank systems. In the Tank Farm area, there are five storage tanks. The tanks are installed and operated in a manner consistent with good tank management practices. All tanks are accessible for regular inspection and maintenance, and surveillance of the tank storage areas is performed on a continuous basis by operators located in the immediate area. The tanks are assigned for primary and secondary waste storage.

All tanks have been designed with allowances which provide continuing assurance of structural integrity during all operations. Table D2-1 summarizes applicable design information for the tanks. All hazardous waste storage tanks are maintained at atmospheric pressure. Design pressure ratings and shell thicknesses exceeding minimum requirements provide operator margin to assure that tanks will not collapse or rupture.

Figure D-2 shows a diagram of the piping, instrumentation and process flow pattern.

D-2(b): Tank Corrosion and Erosion (122.75(b)(2)(ii); 264.192(a))

Liquid wastes generated from manufacturing processes at Mayaguez are developed to be compatible with storage tank materials of construction. Analysis of waste, as described in Section C-2 is conducted to assure that wastes remain compatible. Tank linings or coatings are not required and treatment reagents are not necessary to assure that the wastes stored will not corrode or erode tank internal surfaces.

Operating experience has demonstrated that mild carbon steel is compatible with all hazardous liquid wastes generated and stored in tanks at Mayaguez. Prior to transfer of hazardous liquid wastes into storage tanks, the pH of waste streams requiring neutralization is measured by each generating department, and neutralizing materials are added, as required. On a regular basis, the pH of secondary waste in the storage tanks is taken to verify that the waste has been properly neutralized. During storage, the pH of secondary waste is maintained between 4 and 12 to prevent tank corrosion. Hazardous wastes stored at Mayaguez contain solvents which are compatible when mixed in any proportion. Other than the pH checks discussed above, no other procedures are necessary to assure that hazardous liquid wastes generated by each department will be compatible with the storage tanks. At least once every year, each tank is inspected for localized and general corrosion. Based on inspections performed in the past, localized corrosion in the form of pitting and galvanic corrosion is far more

likely than general corrosion. The tanks are inspected with an ultrasonic detector. Minimum thicknesses are verified using this device, at multiple points on each tank. At least four points are tested at right angles at the upper section of the tank (weakest part of the tank 1/4" thick) and four points at right angles close to the bottom of the tank, where the maximum pressure is exerted by the liquid. Visual inspection of tank internal surfaces is the best method for detecting localized corrosion. When required, localized repairs have been accomplished considerably in advance of the time when a significant leak or tank failure was likely. These inspections, which are conducted for each tank at least once every year provide continuing assurance that tanks storing hazardous liquid wastes remain in good condition and in compliance with design standards.

D-2(c): Tank Management Practices (122.25(b)(2)(iv); 122.15(b)(2)(v), 264.192(b))

Controls are provided to prevent inadvertent overfilling of hazardous liquid waste storage tanks. Tanks which receive materials directly from manufacturing processes are equipped with piping at the top of the tanks which will divert waste to an adjacent tank to prevent overfilling. Since all wastes stored are compatible, transfers from one tank to another will not result in mixing of incompatible wastes. Tank levels of all hazardous waste storage tanks are measured at three levels, continuously. Pump controls are easily accessible to provide piping instrumentation

and flow for a typical hazardous waste storage tank for each of the two storage systems at Mayaguez Plant. Tank instrumentation consists of an automatic level indicator installed in the control room of the waste treatment plant. Flame arrestors are installed in the vents of all tanks to eliminate the possibility of explosion. All tanks are also grounded to provide protection from lighting.

A diagram of the storage tanks and other details is provided in Figure D-2.

D-3: Waste Piles

This section is not applicable to our facility.

D-4: Surface Impoundments

This section is not applicable to our facility.

D-5: Incinerator

D-5b: Trial Burn

D-5b(1): New Incinerator Start-up/Shake down (122.17(b)(1))

This section is not applicable to our facility.

F-2b(2): Tank Inspection (264.194)

Liquid hazardous waste is collected, stored and fed to a liquid incinerator from closed storage tanks. All tanks are equipped with level gauges. Twice per day at twelve-hour intervals, all tanks are gauged and the tank levels recorded to monitor tank contents and total inventory. All tanks are equiped with level indicators with alarm. The readout of these level indicators is located in the Control Room of the Waste Treatment Plant. The level is set at 90% of total tank capacity. Therefore, when the level inside the tank reaches 90% of the total capacity, a control valve is actuated which closes the feeding into the tank. Weekly, tanks and tank areas are formally inspected for leaks, signs of leakage and the condition of the containment dikes. Storage tanks are painted and the area is concrete covered. Leakage is readily visible as discolored or blistered parts and/or in the discoloration of concrete in the area.

If a leak is detected (and for routine maintenance) the contents of the tank are transferred by pumping to other storage tanks. The maximum operational volume of the storage tank is 90%. Due to our operational procedures, an empty tank will always be available to empty any faulty tank. The liquid heel is removed by a vacuum truck and transferred to another tank. Sludge is removed by reslurrying in a host solvent and then is transferred to metal drums to be stored or treated according to their characteristics. The tank is washed, air dried and tested prior

to personnel entry. The tank interior is visually inspected for corrosion and the wall thickness is measured by an ultrasonic thickness tester and recorded. Repairs are made by welding or plate replacement.

A detailed safety procedure is used for entering tanks. The procedure used is available at the plant and includes the following:

1. Check that the tank and associated mechanical and electrical equipment are properly locked out.
2. Verification that the tank has been properly drained and cleaned.
3. Check that a safe means of entry and exit is available.
4. Check that emergency breathing air devices are available for at least two people.
5. Assurance that persons entering the tank are wearing a safety harness or belt with a life line.
6. Check for presence of a tank watcher outside the tank at all times who is able to communicate with the people inside the tank.
7. Assurance that the tank is ventilated.
8. Check of the tank with a explosimeter and oxygen meter prior to entry.
9. Signatures that the above checks have been completed by the person entering the tank, the area supervisor, and the tank watcher.

F-2b(3): Waste Pile Inspection (264.254; 264.255)

Not applicable to this plant.

F-2b(4): Surface Impoundment Inspection (Reserved)

Not applicable to this plant.

F-2b(5): Incinerator Inspection (264.347)

Incinerators and associated equipment are visually inspected daily for leaks, spills and fugitive emissions. Containment repairs are accomplished in a timely fashion.

Emergency waste feed cut-off systems and alarms are designed and installed under a "fail-safe concept". The sensors and signal transmission systems are always energized during operation and if any component fails, the waste feed is cut-off. The waste feed cut-off valves are signaled to open (fail closed) valves. This affords a continuous test to assure reliability of the waste feed cut-off systems.

Frequent monitoring and inspection as described in Section F-2a under "Schedule of Inspection" assures set point accuracy of the feed cut-off sensors.

Incinerator shut down and start-up is required to operationally test each waste feed cut-off control device. Incinerator shut down and start-up periods are the most critical times for potential problems which could cause environmental or human health hazards.

In light of the above information, Eli Lilly Industries, Inc.,Mayaguez will conduct operational testing of the emergency waste feed cut-off system every two (2) months. This testing consists of a total system check (including activation of waste feed cutoff valves) of waste feed cutoff due to low incinerator temperature and high carbon monoxide detection. In addition, low temperature and high carbon monoxide set points are electronically checked daily. Any deficiencies found during these checks, such as failure of the system to cutoff waste feed or cutoff at an incorrect set point, are corrected immediately. Waste feed is discontinued until full correction of the deficiencies is accomplished.

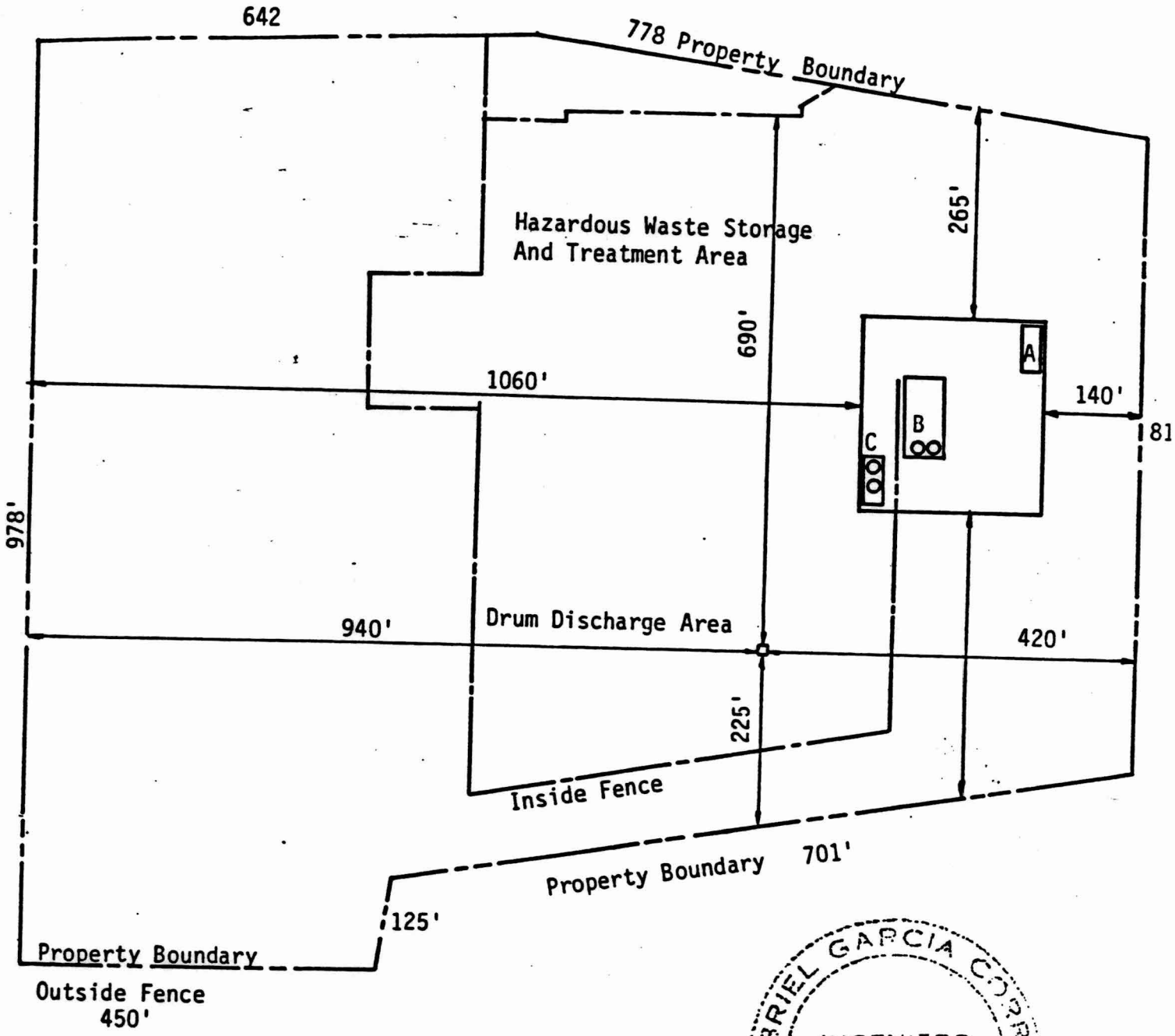
F-2c: Remedial Action

Whenever a problem is detected in any area related to hazardous waste the following procedure is used:

1. If the abnormal condition is a spill, fire or any condition that could threaten the personnel or the environment the alarm is actuated and the safety cordinator or equivalent will take care of the emergency.

2. If the condition is in a level instrument, transfer pump, leak or any equipment that could lead to a spill or emergency situation, a work order is issued and given to Maintenance Department. The situation will be solved as soon as

Figure F-5c: Location of Hazardous Waste Containers



A - Incinerator
B - Drums Storage Area
C - Storage Tanks

GABRIEL GARCIA CORREA
INGENIERO
GRADUADO
LIC. NO. 7636

Figure F-5C
Scale 1" = 200'

ELI LILLY INDUSTRIES, INC.

CALL BOX 1198 - PUEBLO STATION
CAROLINA, PUERTO RICO 00628-1198

KM. 146.7 STATE ROAD NO. 2
MAYAGUEZ, PUERTO RICO

P.O. BOX 1748
MAYAGUEZ, PUERTO RICO 00709

ADDITIONAL INFO RECEIVED 12/23/85

November 18, 1985

Mr. Lionel Vega
Chemical Engineer
Waste Identification Branch
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Vega:

Re: Delisting Petitions
Eli Lilly Industries, Inc.
Carolina Facility, PRI
Mayaguez Facility, PRIV

Eli Lilly Industries, Inc., received two requests each dated September 17, 1985 asking for additional data on the two referenced delistment petitions. EPA considers this information necessary to make a final decision on temporary delistments provided for waste from these two facilities dated December 16, 1981. Eli Lilly Industries, Inc., was requested to submit this additional information to EPA by November 15, 1985, or EPA will propose to deny the petitions in the Federal Register on or about January 2, 1986.

The wastes for which Eli Lilly Industries, Inc., has received temporary delistment originally became hazardous wastes by definition in November 1980, when the RCRA Hazardous Waste Management Regulations became final. The waste were wastewater treatment plant sludges resulting from the treatment of a hazardous waste mixture of solid wastes and trace amounts of listed hazardous wastes.

Eli Lilly Industries, Inc., obtained temporary delistments by demonstrating that these wastes were in fact only hazardous by definition, and did not present any threat to human health or the environment. Since the temporary delistments were issued, the RCRA Regulations have been revised so that pursuant to 40 CFR 261.3(A)(2), wastewater that is the mixture of a hazardous waste and a solid waste and that contains deminimis levels of 40 CFR 261.3 (A)(2)(IV)(B) listed constituents at the headworks of the wastewater treatment plant, is now by definition not a hazardous waste, and therefore, any sludge from the treatment of these wastewaters is also not a hazardous waste.

Therefore, these two wastewater treatment sludges are no longer hazardous wastes by regulatory definition, and Eli Lilly Industries, Inc., does not require final delistment of these two waste streams. Eli Lilly Industries, Inc. officially withdraws its two delistment petitions for the facilities at Mayaguez and Carolina, Puerto Rico.

Sincerely yours,

Jaime R. Escalona
President and General Manager

COPIES

51.01.03.03

attachments to letter from Eli Lilly to EPA. 10.17.85

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STORAGE TANKS (ABOVE GROUND)

QUESTION 2

A. TWO (2) Storage tanks, which hold aqueous wastes from manufacturing areas, are located next to the wastewater treatment facility and in the facility storage tank area. Aqueous waste composition is 90% water, 7% dissolved solids and 3% organic solvent mix.

Waste Acetonitrile is accumulated in an above ground storage tank prior to transport by toll arrangement offsite for recovery and return to the facility as recovered Acetonitrile for reuse.

B. The aqueous wastes are not considered hazardous wastes because they are not listed wastes in 40 CFR 261.31 or 261.32 and the wastes do not exhibit any of the characteristics of ignitability, corrosivity, reactivity, or EP toxicity.

The waste Acetonitrile for recovery is considered hazardous because it meets the hazardous characteristic of ignitability.

C. The two aqueous waste storage tanks are made of carbon steel and have a volume of 12,000 gallons each. The dimensions of each tank are 8 feet in diameter and 18 feet high.

The waste Acetonitrile accumulation storage tank is a stainless steel tank with a volume of 12,000 gallons. The dimensions of the tank are 8' in diameter and 18' high.

QUESTION 3

A. Eli Lilly Industries, Inc. has never experienced any spills or releases to the Environment from the aqueous waste storage tanks or the waste Acetonitrile accumulation tank. These tanks are in good condition and equipped with level indicators.

B. The waste Acetonitrile tank and one of the aqueous waste tanks have a diked secondary containment system, which would contain any spill that might occur from the tank. The other aqueous waste tank has an overflow line that discharges directly into the facility's wastewater treatment plant.

QUESTION 4

Not applicable

QUESTION 5

Not applicable

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WASTEWATER TREATMENT UNITS AND SURFACE IMPOUNDMENTS

QUESTION 2

A. The wastewaters treated in this facility are wash waters, blowdown from cooling towers, boiler blowdown, regeneration wastes from deionizers, sanitary wastewaters, and wastewater from manufacturing areas.

B. The wastewater that goes to the wastewater treatment plant is not a hazardous waste. The wastewater does contain trace organic solvents, but the wastewater does not meet any of the hazardous waste characteristics and satisfies the exclusion definition of 40 CFR 261.3 (a)(iv).

The wastewater treatment plant is comprised of the following treatment units:

- Concrete Neutralization Tank	34000 gal.	35' x 20' x 7',
- Earthen Equalization Impoundment	150000 gal.	60' x 60' x 12'
- Concrete Lined Earthen Oxidation Ditch (Impoundment)	190000 gal.	60' x 30' x 10'
- Carbon Steel Clarifier	28000 gal.	20' x 12' diam
- Carbon Steel Sludge Thickener	12000 gal.	12' x 12' diam
- Carbon Steel Sludge Tank	4000 gal.	6' x 10' diam
- Sludge Belt Press		
- Carbon Steel Solids Hopper	4000 gal.	8' x 8' diam

QUESTION 3

A. Eli Lilly Industries, Inc. has not recorded any spills or releases of hazardous substances into the environment from the wastewater treatment plant. In 1983, the facility did experience a spill of fuel oil in which a small quantity reached the river, via the storm sewer. At that time, an emergency brigade was arranged to contain the spill to the extent possible. All local and federal authorities were notified about the spill and the actions taken to contain and clean up to the spill.

QUESTION 4

A. The amount of fuel oil spilled in the event described above was estimated to be 50 gallons. The material was contained and cleaned up using absorbent pads. No adverse effect to the Environment was observed.

QUESTION 5

Not applicable

.....

WASTE RECYCLING OPERATIONS

QUESTION 2

A. Solvents used in the manufacturing processes are recovered and reused. These include Toluene, Alcohols, Ether, and Acetone. These solvents are collected in above ground feed tanks and recovered by distillation. The solvents are considered hazardous wastes prior to recovery.

B. All the solvents listed in A. are considered ignitable and, therefore, are hazardous. The spent solvents Toluene and Acetone are also hazardous waste by listing in 40 CFR 261.31. Both Toluene and Acetonitrile are listed hazardous constituents in 40 CFR 261 Appendix VIII.

C. All feed tanks are carbon steel with a capacity of 12000 gallons. The tanks have dimensions of 8' in diameter and 18' high. These tanks have a concrete dike secondary containment system. They have been in operation for 15 years. These feed tanks are considered ninety day accumulation tanks.

QUESTION 3

A. The facility has never experienced any spills or releases to the Environment from these tanks. Any spills should they occur would be contained by the secondary containment system and immediately cleaned up.

QUESTION 4

Not applicable

QUESTION 5

Not applicable

All solid waste Management units discussed above are located on the attached site plan drawings.